

Remarks

Applicant appreciates the Examiner's withdrawal of the previous rejections and the objection to the drawings. The non-final Office Action dated January 23, 2009 indicates that claims 5 and 14 are objected to and lists the following new grounds of rejection: claims 1-17 stand rejected under 35 U.S.C. § 103(a) over applicant's admitted prior art ("APA", specification, page 1) in view of Tamai (U.S. Patent No. 6,580,180) and Kawaguchi (U.S. Patent No. 5,793,189). Applicant traverses all of the rejections and, unless explicitly stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action.

Applicant respectfully traverses the § 103(a) rejection of claims 1-17 because none of the cited references teach or suggest, as asserted by the Examiner, a logic circuit (as claimed) that is powered by the same DC input voltage that powers the DC/DC converter; because none of the cited references teaches this aspect, no combination of these teachings can be used to provide correspondence, whether or not the Examiner views Applicant's invention "as a whole" as mandated by § 103. In a poor attempt to assert correspondence, the Office Action has improperly used circuit elements of the cited references, not in the manner taught by these references, but in the manner taught by Applicant in an improper hindsight reconstruction of the claimed invention. Such a hindsight reconstruction is contrary to the requirements of § 103 and relevant law as was recently affirmed by the Supreme Court in *KSR* (discussed in detail below), particularly in situations, such as here, where the cited references teach away from the Office Action's proposed combination. The following discussion particularly address the impropriety of the § 103(a) rejection.

The § 103(a) rejection of claims 1-17 is improper because the Office Action fails to provide a valid reason for the proposed modification based on the '189 reference and because the cited references teach away from the Office Action's proposed combination. The asserted basis to combine is contrary to the requirements of § 103 and relevant law as was recently affirmed by the Supreme Court in *KSR*. ("A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art.") *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007). In this instance, the Office Action appears to propose modifying

Figure 1 of the ‘180 reference such that MPU 110 (*i.e.*, the asserted logic circuit) receives the voltage supplied by battery 12 directly from battery 12 to power MPU 110. The Office Action erroneously asserts that such a modification would “reduce power consumption by turning off the converter when it is not needed.” Applicant submits that simply providing the voltage of battery 12 directly to MPU 110 would not reduce power consumption in any manner and in fact would likely increase power consumption as the modification would require an additional converter to enable the MPU 110 to use the high voltage (42V) of battery 12 to power the MPU 110, which is taught by the ‘180 reference as being powered by the 12V battery 13. *See, e.g.*, Figure 1 and Col. 4:48-59.

In addition, Applicant submits that the ‘189 reference teaches away from modifying the circuit of the ‘180 reference such that a separate control circuit (*i.e.*, MPU 110) turns converter 120 on/off responsive to a reduction in battery capacity of battery 12. *See, e.g.*, *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007) (“[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious.”). Specifically, the ‘189 reference does not teach or suggest a separate controller (*e.g.*, MPU 110) that provides a signal to turn off a converter 120 when loads 14 supplied with power by the converter 120 are turned off as taught by the ‘180 reference. Instead, the ‘189 reference teaches simplifying a circuit configuration by using the output voltage regulating function of a DC/DC converter 6 to detect a reduction in battery capacity of battery 2 “without provision of a special circuit for detecting the reduction in the battery capacity.” *See, e.g.*, Figure 1 and Col. 3:46-56. The ‘189 reference enables converter 6 to be turned on/off without the need for a separate control circuit such as MPU 110 of the ‘180 reference. Thus, the ‘189 reference teaches away from modifying the MPU 110 of the ‘180 reference in the manner proposed by the Office Action.

Moreover, the Office Action appears to improperly propose modifying the ‘180 reference, not in the manner taught by the cited references, but in the manner taught by Applicant. As discussed above, the ‘189 reference teaches away from using a separate control circuit such as MPU 110. The only reference present that teaches powering a separate control circuit with the same DC voltage that is input to a DC/DC converter is Applicant’s disclosure. Thus, Applicant submits that the Office Action’s proposed

modification is improperly based on Applicant's disclosure in a hindsight reconstruction of the claimed invention. *See, e.g.*, M.P.E.P. § 2142. Contrary to the Office Action's assertion, "(s)electing the source of input power for the logic circuit from the possible DC voltages available in the vehicle" is not a matter of design choice." In contrast to the '180 and '189 references, Applicant's invention, in certain embodiments (*e.g.*, claims 9-10 and 16) does not include a battery (*e.g.*, battery 13 of the '180 reference and battery 7 of the '189 reference) that is separate from the power supply that provides the DC input voltage. As such, if Applicant's control circuit were not supplied with power by the DC input voltage, Applicant's control circuit would be unable to turn the DC/DC converter back on once it is turned off. In other words, referring to Figure 1 of the '180 reference, if junction box 11 did not include battery 13, MPU 110 would be unable to turn converter 120 on when it is off since the MPU 110 is supplied with power by the converter 120.

In view of the above, the § 103(a) rejection of claims 1-17 is improper and Applicant requests that it be withdrawn.

Regarding the objection to claims 5 and 14, Applicant has amended these claims in a manner consistent with that suggested by the Office Action. Thus, Applicant requests that the objection to claims 5 and 14 be withdrawn.

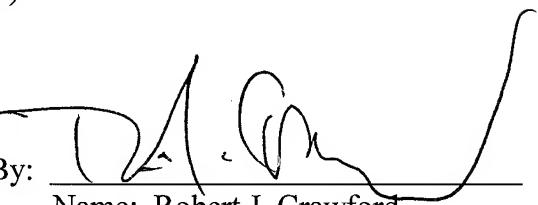
Applicant notes that minor amendments have been made to claims 1, 5, and 13 to clarify that the circuit elements are used for operating the vehicle. Applicant submits that these amendments are not intended to change the scope of these claims since aspects relating to the vehicle were already present in the preambles of these claims.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilska, of NXP Corporation at (408) 474-9063 (or the undersigned).

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